

Statement of Assistant Secretary David Sandalow
U.S. Department of Energy
Before the
Subcommittee on Energy and Power
Committee on Energy and Commerce
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Chairman Whitfield, Ranking Member Rush, and Members of the Subcommittee, thank you for the opportunity to appear before you today at this hearing on H.R. 909, A Roadmap for America's Energy Future.

The Administration agrees with many of the goals of the sponsors. For example, the Administration believes that facilitating the efficient, responsible development of our oil and gas resources is a necessary component of energy security. And we are working to expand cleaner sources of energy, including renewables like wind, solar, and geothermal, nuclear power, as well as clean coal and natural gas on public lands.

H.R. 909 touches on programs implemented by a number of Administration's agencies, and I cannot comment in detail about programs outside of the Department of Energy's purview. As a general matter, however, the Administration has serious concerns with many of the provisions in this legislation, and has recently opposed legislation similar to components of H.R. 909. For example, a number of the changes in Title I would make amendments to Interior's offshore energy program, undercutting safety and environmental reforms adopted in the wake of the Deepwater Horizon oil spill, and open the Coastal Plain of the Arctic National Wildlife Refuge to oil and gas leasing. Department of the Interior and other involved agencies may have additional views on this legislation.

in the remainder of my testimony, I would like to discuss the Administration's energy agenda, and address several specific provisions from H.R. 909.

In his State of the Union address, President Obama laid out a plan for the United States to win the future by out-innovating, out-educating and out-building the rest of the world, while at the same time addressing the deficit.

Many countries are moving aggressively to develop and deploy the clean energy technologies that the world will demand in the coming years and decades. As the President said, this is our generation's "Sputnik moment."

We must rev up the great American innovation machine to win the clean energy race and secure our future prosperity. To that end, President Obama has called for increased investments in clean energy research, development and deployment. In addition, he has proposed a bold but achievable goal of generating 80 percent of America's electricity from clean sources by 2035.

A Clean Energy Standard will provide a clear, long-term signal to industry to bring capital off the sidelines and into the clean energy sector. It will grow the domestic market for clean sources of energy – creating jobs, driving innovation and enhancing national security. And by drawing on a

wide range of energy sources including renewables, nuclear, clean coal and natural gas, it will give utilities the flexibility they need to meet our clean energy goal while protecting consumers in every region of the country.

The Department of Energy's goal is to strengthen the nation's economy, enhance our security and protect the environment by investing in the following priorities:

- Supporting groundbreaking basic science, research and innovation to solve our energy challenges and ensure that the United States remains at the forefront of science and technology;
- Leading in the development and deployment of clean and efficient energy technologies to reduce our dependence on oil, accelerate the transition to a clean energy economy and promote economic competitiveness; and
- Strengthening national security by reducing nuclear dangers, maintaining a safe, secure and effective nuclear deterrent and cleaning up our Cold War nuclear legacy.

While we are investing in areas that are critical to our future, we are also rooting out programs that aren't needed and making hard choices to tighten our belt. Additionally, we are improving our management and operations so we function more efficiently and effectively.

Leading in the Global Clean Energy Economy

As the President said in his State of the Union address, investing in clean energy will strengthen our security, protect our planet, and create many thousands of new jobs here at home. A few examples of the Administration's efforts are discussed below.

Through programs to make homes and buildings more energy efficient, including a new "Better Buildings Initiative" to make commercial buildings 20 percent more efficient over the next decade, we will save money for families and businesses by saving energy. That is money that can be re-invested back into the economy. In addition, the Administration supports the research, development and deployment of renewable sources of energy like wind, solar and geothermal. It supports the modernization of the electric grid and the advancement of carbon capture and sequestration technologies. And it supports reducing our dependence on oil by developing the next generation of biofuels and accelerating electric vehicle research and deployment to support the President's goal of putting one million electric vehicles on the road by 2015. This includes a competitive program to encourage communities to invest in electric vehicle infrastructure.

The Administration is committed to promoting safe and responsible domestic oil and gas production as part of a broad energy strategy that will protect consumers and reduce our dependence on foreign oil. Safety and environmental reforms that the Administration implemented in response to the Deepwater Horizon oil spill are critical to achieving those objectives. Fifty-five new shallow water permits have been issued since the Administration's stronger safety standards were put in place on June 8, 2010, and deepwater permit applications are also being processed in a timely manner. Since the end of February, when industry first demonstrated to safety regulators the capability to contain an oil spill, fifteen deepwater wells have been permitted. However, we can all agree there is still work to be done. Department of Interior Secretary Salazar recently testified on other pending oil and gas legislation before the Senate Energy and Natural Resources Committee and delineated the Administration's three primary objectives:

- Remove outdated disincentives to the prompt development of oil and gas leases;
- Provide the tools for the Federal Government to oversee offshore oil and gas development activities on a timely and effective basis; and
- Ensure a fair return for American taxpayers and accountability for safety violations and oil spills.

A focus on the environmental impacts of offshore oil and gas operations are priorities of the Administration. In addition, consistent with the framework presented by the *Blueprint for a Secure Energy Future*, we must concurrently work to secure our energy future by ensuring the potential for renewable energy development on our public lands and waters is realized.

Mr. Chairman, I drove to work today in a plug-in hybrid vehicle. At night, I plug that car into a regular electric outlet in my garage and often get 80 miles per gallon in city driving. The electricity I use to drive costs the equivalent of roughly 75 cents per gallon. The U.S. Department of Energy is investing in research to bring down the cost of lithium ion batteries. Someday one of my grandchildren may look at one of my children and say “you mean you couldn’t plug in cars when you were young?”

We’re also focused on moving clean energy technologies from the lab to the marketplace. Over the past two years, the Department’s loan programs have supported more than \$30 billion in loans, loan guarantees, and conditional commitments to guarantee loans for 28 clean energy and enhanced automotive fuel efficiency projects across the country, which the companies estimate will create or save more than 61,000 jobs. These deployment efforts build on the substantial investment made in the clean energy sector by the Recovery Act, and are supplemented by tax incentives that have also played an important role in bringing clean energy projects to market, such as the 48C manufacturing tax credits and the 1603 cash grants in lieu of investment tax credits, which the 2012 budget also expands.

Nuclear energy also has an important role to play in our energy portfolio. To jumpstart the domestic nuclear industry, the President’s budget requests up to \$36 billion in loan guarantee authority. It also invests in the research and development of advanced nuclear technologies, including small modular reactors. H.R. 909 takes a different approach to expanding nuclear power production. The legislation directs the Nuclear Regulatory Commission to issue operating permits for 200 new commercial nuclear reactors.

H.R. 909 creates a “reverse auction” mechanism to fund renewable energy projects. As required by section 942 of the Energy Policy Act of 2005, in July 2010 the Department of Energy issued a Notice of Program Intent to request documents for pre-certification. The purpose is to help defray the cost of cellulosic biofuel production and serve as an important incentive and financial benefit to show the investment community they have a cash flow to reduce risk. Incentives such as the reverse auction are critical to financing “first-of-a-kind” or “pioneer” plants. As part of the Fiscal Year 2012 Budget request, the Department has proposed an expansion of this reverse auction authority to include both cellulosic ethanol and other advanced biofuels as defined in EISA 2007. DOE detailed analysis demonstrated that the Department needs to create a strong market signal for cellulosic ethanol and other advanced biofuels to solidify investment towards commercialization and meet the RFS targets.

As part of the Department's technical review of the reverse option mechanism proposed in H.R. 909 the Department identified a limited scope of projects that this mechanism would fund even within the renewable category, much less outside it. Further, as described previously, the Department's experience with a reverse auction for biofuels recognized the need for structuring auctions in a way that recognizes investor risk. It is unclear if the reverse auction mechanism envisioned in H.R. 909 creates the necessary incentives for emerging renewable technologies. The Administration's Clean Energy Standard approach recognizes the importance of incentivizing the deployment of cleaner types of traditional energy sources as economies of scale for the widespread deployment of renewable energy can be realized.

Outside of a number of technical issues we have identified in the reverse auction mechanism in H.R. 909, it raises a number of policy issues related how a reverse auction mechanism as described in this legislation would complement or compete against existing programs. We share Rep. Nunnes' view that reverse auctions are a useful tool for promoting renewable energy. From our experience with reverse auctions, it's important to protect the taxpayers by requiring adequate assurance from bidders that they'll perform. We look forward to working with the Committee on a provision that accomplishes our shared goal of promoting American renewable energy and protecting taxpayers.

Supporting Groundbreaking Science

To spur innovation, the Administration has prioritized investments in basic and applied research and keeps us on the path to doubling funding for key science agencies, including the Department's Office of Science. As Norm Augustine, former Chairman of Lockheed Martin and former Under Secretary of the Army, has said, under-funding R&D in a time of austerity is like removing the engine of an aircraft to reduce its weight.

That is why our budget request increases support for the Department's comprehensive research strategy to accelerate energy breakthroughs.

Through the Office of Science, we're expanding our investment in basic energy sciences, advanced scientific computing and biological and environmental sciences – all key areas for our future economic competitiveness. In addition, Energy Efficiency and Renewable Energy (EERE) programs provide a vital link between advances in basic research and Administration efforts to commercially deploy clean energy technologies by supporting applied research, technology development and demonstrations of promising clean energy technologies.

The Administration also supports increased investment in the Advanced Research Projects Agency-Energy, also known as ARPA-E. This investment will allow ARPA-E to continue the promising early-stage research projects that aim to deliver game-changing clean energy technologies. ARPA-E's projects are generating excitement both in the Department and in the private sector. For example, through a combined total of \$24 million from ARPA-E, six companies have been able to advance their research efforts and show the potential viability of their cutting-edge technologies. This extremely valuable early support enabled those companies to achieve R&D milestones that, in turn, have attracted more than \$100 million in private sector funds to the projects. This is precisely the innovation leverage that is needed to win the future.

Another key piece of our research effort is the Energy Innovation Hubs. Through the Hubs, we are bringing together our nation's top scientists and engineers to achieve similar game-changing energy goals, but where a concentrated effort over a longer time horizon is needed to establish innovation leadership. The Department has established three Energy Innovation Hubs in the areas of energy efficient buildings, modeling and simulation for nuclear reactors and fuels from sunlight. We are proposing to continue to support the three existing Hubs and to establish three new Hubs in the areas of batteries and energy storage (which will be funded beginning in FY 2011) smart grid technologies and systems, and critical materials. The Energy Innovation Hubs were modeled after the Department of Energy's BioEnergy Institutes, which have established an outstanding three-year track record.

Finally, the Department continues to support the Energy Frontier Research Centers, which are mostly university-led teams working to solve specific scientific problems that are blocking clean energy development.

The Energy Innovation Hubs, ARPA-E, and EFRCs represent three complementary approaches to advance groundbreaking discovery. We don't know where the big energy breakthroughs are going to come from. To reach our energy goals, we must take a portfolio approach to R&D: pursuing several research strategies that have proven to be successful in the past. But I want to be clear – this is not a “kitchen sink” approach. This work is being coordinated and prioritized, with a 360-degree view of how these pieces fit together. Taken together, these initiatives will help America lead in science and technology innovation.

H.R 909 does not include any provisions related to research and development programs that empower America to lead in science and technology innovation.

In conclusion, I want to thank the Committee for inviting me to testify on issues associated with H.R. 909 that relate to the Department of Energy's mission. I appreciate the opportunity to reiterate the President's roadmap for a Clean Energy Future that includes increased generation, increased efficiencies, and a priority on maintaining our global competitiveness by important investments in research and development.